

## PART 147—STATE UNDERGROUND INJECTION CONTROL PROGRAMS

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### Subpart DD—Nevada

#### **§ 147.1450 State-administered program.**

The UIC program for all classes of underground injection wells in the State of Nevada, other than those on Indian lands, is the program administered by the Nevada Division of Environmental Protection approved by EPA pursuant to section 1422 of the SDWA. Notice of this approval was published in the FEDERAL REGISTER on February 18, 1988; the effective date of this program is October 5, 1988. This program consists of the following elements, as submitted to EPA in the State's program application.

(a) *Incorporation by reference.* The requirements set forth in the State statutes and regulations cited in this paragraph are hereby incorporated by reference and made a part of the applicable UIC program under the SDWA for the State of Nevada. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained at the Nevada Department of Conservation and Natural Resources, Division of Environmental Protection, 201 South Fall Street, Carson City, Nevada 89710.

Copies may be inspected at the Environmental Protection Agency, Region IX, 215 Fremont Street, San Francisco, California 94105, or at the Office of the Federal Register, 800 North Capitol Street NW., suite 700, Washington, DC.

(1) Nevada Revised Statutes [NRS], Volume 25, Chapters 445.131 through 445.354, Inclusive. 1987.

(2) Nevada Revised Statutes [NRS], Volume 29, Chapters 534A.010 through 534A.090, Inclusive. 1987.

(3) Nevada Revised Statutes [NRS], Volume 28, Chapters 522.010 through 522.190, Inclusive. 1987.

(4) Nevada Administrative Code [NAC], Underground Injection Control Regulations, Sections 1 through 96.1, Inclusive. July 22, 1987, revised September 3, 1987 (amending NAC Chapter 445).

(5) Nevada Administrative Code [NAC], Regulations and Rules of Practice and Procedure adopted Pursuant to NRS 534A, Sections 1 through 69, Inclusive. November 12, 1985 (amending NAC Chapter 534A).

(6) Nevada Administrative Code [NAC], Regulations and Rules of Practice and Procedure adopted

Pursuant to NRS 522.010 through 522.625, Inclusive. July 22, 1987 (amending NAC Chapter 522).

(b) The Memorandum of Agreement between EPA Region 9 and the Nevada Department of Conservation and Natural Resources signed by the EPA Regional Administrator on April 6, 1988.

(c) *Statement of Legal Authority.* Statement and Amendment to the Statement from the Attorney General of the State of Nevada, signed on July 22, 1987 and November 6, 1987 respectively, by the Deputy Attorney General.

(d) The Program Description and any other materials submitted as part of the original application or as supplements thereto.

[53 FR 39089, Oct. 5, 1988]

#### **§ 147.1451 EPA administered program—Indian lands.**

(a) *Contents.* The UIC program for all classes of wells on Indian lands in the State of Nevada is administered by EPA. This program consists of the UIC program requirements of 40 CFR parts 124, 144, 146, 148, and any additional requirements set forth in the remainder of this subpart. Injection well owners and operators, and EPA shall comply with these requirements.

(b) *Effective dates.* The effective date of the UIC program for Indian lands in Nevada is June 25, 1984.

[53 FR 43088, Oct. 25, 1988, as amended at 56 FR 9417, Mar. 6, 1991]

#### **§ 147.1452 Aquifer exemptions. [Reserved]**

#### **§ 147.1453 Existing Class I, II (except enhanced recovery and hydrocarbon storage) and III wells authorized by rule.**

*Maximum injection pressure.* The owner or operator shall limit injection pressure to the lesser of:

(a) A value which will not exceed the operating requirements of § 144.28(f)(3) (i) or (ii) as applicable; or

(b) A value for well head pressure calculated by using the formula:

$$P_m = (0.733 - 0.433 \text{ Sg})d$$

where

$P_m$ =injection pressure at the wellhead in pounds per square inch

$S_g$ =specific gravity of injected fluid (unitless)

$d$ =injection depth in feet.

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**§ 147.1454 Existing Class II enhanced recovery and hydrocarbon storage wells authorized by rule.**

(a) *Maximum injection pressure.* (1) To meet the operating requirements of § 144.28(f)(3)(ii) (A) and (B) of this chapter, the owner or operator:

(i) Shall use an injection pressure no greater than the pressure established by the Regional Administrator for the field or formation in which the well is located. The Regional Administrator shall establish such a maximum pressure after notice, opportunity for comment, and opportunity for a public hearing, according to the provisions of part 124, subpart A of this chapter, and will inform owners and operators in writing of the applicable maximum pressure; or

(ii) May inject at pressures greater than those specified in paragraph (a)(1)(i) of this section for the field or formation in which he is operating provided he submits a request in writing to the Regional Administrator, and demonstrates to the satisfaction of the Regional Administrator that such injection pressure will not violate the requirement of § 144.28(f)(3)(ii) (A) and (B). The Regional Administrator may grant such a request after notice, opportunity for comment, and opportunity for public hearing, according to the provisions of part 124, subpart A of this chapter.

(2) Prior to such time as the Regional Administrator establishes field rules for maximum injection pressure based on data provided pursuant to paragraph (a)(2)(ii) of this section the owner or operator shall:

(i) Limit injection pressure to a value which will not exceed the operating requirements of § 144.28(f)(3)(ii); and

(ii) Submit data acceptable to the Regional Administrator which defines the fracture pressure of the formation in which injection is taking place. A

single test may be submitted on behalf of two or more operators conducting operations in the same formation, if the Regional Administrator approves such submission. The data shall be submitted to the Regional Administrator within one year following the effective date of this program.

(b) *Casing and cementing.* Where the Regional Administrator determines that the owner or operator of an existing enhanced recovery or hydrocarbon storage well may not be in compliance with the requirements of §§ 144.28(e) and 146.22, the owner or operator shall comply with paragraphs (b) (1) through (4) of this section, when required by the Regional Administrator:

(1) Protect USDWs by:

(i) Cementing surface casing by recirculating the cement to the surface from a point 50 feet below the lowermost USDW; or

(ii) Isolating all USDWs by placing cement between the outermost casing and the well bore; and

(2) Isolate any injection zones by placing sufficient cement to fill the calculated space between the casing and the well bore to a point 250 feet above the injection zone; and

(3) Use cement:

(i) Of sufficient quantity and quality to withstand the maximum operating pressure;

(ii) Which is resistant to deterioration from formation and injection fluids; and

(iii) In a quantity no less than 120% of the calculated volume necessary to cement off a zone.

(4) The Regional Administrator may specify other requirements in addition to or in lieu of the requirements set forth in paragraphs (b) (1) through (3) of this section, as needed to protect USDWs.

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